

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning at page 4, line 1 as follows:

It should be noted that a tunneling technology is used for transferring packets from the HA 16 to the FA 17 via path 24. The tunneling technology adds a header including a new destination address and a transferring address to a packet when transferring. The processing that a transferring node adds the header is called encapsulation processing while the processing that a destination node removes the header is called decapsulating processing. In this case where a packet is transferred from the HA 16 to the FA 17, an IP address D, as a transferring address, of the router 15 having the FA 17 and IP address C, as a destination address, of the router 14 having the HA 16 are added as a header.

Please amend the paragraph beginning at page 6, line 3, as follows:

The FA 17 receives the registration request message shown in FIG. 4 from the mobile node 10 and registers (stores) its content. Then, the FA 17 transfers the registration request message to the HA 16 (process 1006). The HA 16 receives the registration request message and registers (stores) its registration content so that packet communication can be performed in the foreign network 21 as well. Further, the HA 16 responds to the FA 17 that registration has been completed (process 1007). More specifically, the FA 17 sends a message in a format shown in FIG. 5 as a response message to the router 15. As shown in FIG. 5, the message includes a home address of the mobile node 10 and an IP address of the home agent (IP address of the router 14, here) FA 17 receives the response message and sends the response message to the mobile node 10. The mobile node 10 receives the response message so that it can recognize that communication is possible (process 1008).

Please amend the paragraph beginning at page 7, line 10, as follows:

The packet sent in this manner includes an identification number of the home network 20 in the network portion of its destination address A. Thus, it is incorporated to the router 14 once. The home agent 16 of the router 14 has already realized that the mobile node 10 was moved to the foreign network 21. The home agent 16 encapsulates the received packet and tunneling-transfers it to the router 15 (processes 1012 and 1213). More specifically, the home agent 16 adds to the packet a new packet whose destination address is an IP address D of the router 15 and whose sender address is an IP address C of the router 14 and sends out the packet to the IP network 22. The router 15 receives the tunnel-transferred and encapsulated packet and decapsulates the packet (process 1014). It should be noted that the destination and sender addresses of the packet resulted from the decapsulation are the same as those before encapsulation, and they are the IP address A of the mobile node 10 and the IP address B of the correspondent node 11, respectively. The decapsulated packet are sent from the router 15 into the foreign network 21 and received by the mobile node 10 (process 1015). In this way, the communication is possible between the mobile node 10 in the foreign network 21 and the correspondent node 11 on the IP network.

Please amend the paragraph beginning at page 14, line 24, as follows:

A packet in a format shown in FIG. 9 is used for notifying address translation information. FIG. 9 shows message type 30, which indicates that it is a message for notifying address translation information here. Further, FIG. 9 shows an unused reserved area 31, a number of address translation information to be notified, a home address 33 (for example, provide address A) of the mobile node 10, and a global address 34 (for example, global address C) mapped to the home address of the mobile node 10. The the home address 33 and the global address 34 make a pair, and a number of this pair is used as the number of the address translation information 32.

Please amend the paragraph beginning at page 15, line 9, as follows:

FIG. 7 is an explanatory diagram for exemplifying a sequence in a ~~chase~~ case where the mobile node 10 is moved from the home network 20 to the foreign network 21 during communication with the correspondent node 11 according to the network construction shown in FIG. 6. FIG. 7 includes processes 100 to 105 in a case where the mobile node 10 exists in the home network 20, and processes 107 to 123 in a case where the mobile node 10 exists in the foreign network 21. In the process 100 in FIG. 7, the mobile node 10 in the home network 20 sends packet data to the router 12 so that it can send data to the correspondent node 11 (process 100). A destination address of the packet is the global address B of the correspondent node 11, while its sender address is the private address A of the mobile node 10. ~~it~~ It should be noted that packets having the destination address B and the sender address A ~~as~~ are referred to Data (B, A) in FIG. 7. The other packets are similarly referred to Data (destination address, sender address).

Please amend the paragraph beginning at page 17, line 9, as follows:

The mobile node 10 having detected the movement requests registration to the FA 17 by using a format shown in FIG. 4 as described above. The FA 17 receives the registration request and notices that the mobile node 10 has been moved into the foreign network 21 (process 108). Further, the FA 17 transfers the registration request to the HA 16 (process 109). The HA 16 receives the registration request from the FA 17 and notices that the mobile node 10 has been moved to the foreign network 21. Then, the HA 16 returns a registration response in a format shown in FIG. 5 described above to the FA 17 (process 110). Further, the registration response is returned from the FA 17 to the mobile node 10 so that the registration will be completed (process 111).

Please amend the paragraph beginning at page 18, line 10, as follows:

Next, a case will be described where data is sent from the mobile node 10 in the foreign network 21 to the correspondent node 11. The mobile node 10 in the foreign network sends a packet to the router 13 in order to send data to the correspondent node 11 (process 116). [[a]] A destination address and sender address of the to-be-sent packet are the global address B of the correspondent node 11 and the private address A of the mobile node 10, respectively. The NAT 19 of the router 13 having received the packet from the mobile node 10 uses address translation information received in process 113 to translate a sender address of the packet from the private address A to the global address C (process 117). The destination address and the sender address of the packet whose address is translated in this manner are both global addresses. Therefore, the packet can be sent onto the IP network and transmitted to the correspondent node 11 (process 118).

Please amend the paragraph beginning at page 20, line 14, as follows:

In process 200 in FIG. 10, the mobile node 10 is moved from the home network 20 to the foreign network 21 (process 200). The mobile node 10 receives an agent advertisement so that it detects that it has been moved to the foreign network 21 (process 201). The mobile node 10 having detected the movement uses a format shown in FIG. 4 in order to request a registration to the FA 17 (process 202). The receipt of the translation request is used as a trigger, and the NAT 19 of the router 13 requests address translation information regarding the mobile node 10 to the NAT 18 of the router 12 (process 203). FIG. 11 is an explanatory diagram for exemplifying a format of a message sent to the NAT 18 as the address translation information request. 40 indicates a message message type, which includes a code indicating that it is a message for requesting address translation information here. 41 indicates that a

reserved area is unused, and 42 indicates a number of address translation information to be requested. 43 indicates a home address of the mobile node 10.

Please amend the paragraph beginning at page 26, line 4, as follows:

FIG. 15 is an explanatory diagram for exemplifying a sequence where, in a network construction shown in FIG. 14, the mobile node 10 is moved from the home network 20 to the foreign network 21 during communication with the correspondent node 11. In FIG. 15 14, 500 to 522 indicate processes, respectively. In the process 500 in FIG. 15, the mobile node 10 in the home network 20 sends a packet to the router 12 in order to send data to the correspondent node 11 (process 500). A destination address of the packet is a global address B while its sender address is a private address A.

Please amend the paragraph beginning at page 27, line 19, as follows:

~~here~~ Here, the home address of the mobile node 10 is a private address. Thus, The FA 17 having received the registration response in the process 510 determines that address translation information regarding the mobile node 10 is required (process 511). Then, the FA 17 sends a message requesting for address translation information regarding the mobile node 10 to the NAT 18 by using the format shown in FIG. 11 (process 512). The NAT 18 returns address translation information of the mobile node 10 in the format shown in FIG. 9 to the FA 17 as a response to the request message in the process 512 (process 513). The FA 17 receives the response and then sends a registration response to the mobile node 10 (process 514). Thus, a registration is completed, and address translation information of the mobile node 10 is set in the FA 17.

Please amend the paragraph beginning at page 28, line 21, as follows:

The correspondent node 11 receives the packet and then sends as a returned packet to the mobile node 10 the packet whose destination address is an address C which is a sender address of the received packet (process 518). The NAT 18 of the router 12 translate the destination address of the returned packet from the correspondent node 11 from the address C of the router 12 to the address A of the mobile node 10. Further, through the HA 16, the NAT 18 sets the destination address and the sender address to the address D of the router 15 and the address C of the router 12 for IP-encapsulation (process 519). The IP-encapsulated packet is tunneled to the FA 17 of the router 15 (process 520). The FA 17 of the router 15 decapsulates the tunneled packet (process 521). ~~the~~ The packet resulted from the decapsulation is sent to the mobile node 10 (process 522). In this ~~was~~ way, communication becomes possible between the mobile node 10 in the foreign network 21 and the correspondent node 11 on the IP network.

Please amend the paragraph beginning at page 30, line 27, as follows:

Next, it will be described a case where data is sent from the mobile node 10 in the foreign network 21 to the correspondent node 11. In process 608, the mobile node 10 creates packet data to be sent to the correspondent node 11. A sender address of the created packet ~~her~~ is not the private address A of the mobile node 10 but is set to the global address C which is mapped to the private address A. The created packet is sent, and then it is received by the correspondent node 11 (process 609). The correspondent node 11 sends a packet by using the address C which is a sender address of the received packet for its destination address as a response to the received packet (process 610). ~~the~~ The packet whose destination address is the address C is received by the router 12. The router 12 uses the NAT 18 in order to translate the destination address of the received packet from the global address C to the private address A (process 611). Further, the HA 16 of the router 12 recognizes by a registration request in

the process 603 that the mobile node 10 is under a management network of the FA 17. The HA 16 IP-encapsulates the address translated packet (process 611) and tunneling-transfers it to the FA 17 of the router 15 (process 612). The FA 17 of the router 15 decapsulates the tunneling-transferred packet in order to obtain the original packet whose destination address is the private address A (process 613). The original packet obtained by the decapsulation is sent to the mobile node 10 (process 614).

Please amend the paragraph beginning at page 35, line 2, as follows:

FIG. 19 is an explanatory diagram for exemplifying a sequence where, in a network construction shown in FIG. 18, the mobile node 10 is moved from the home network 20 to the foreign network 21 during communication with the correspondent node 11. In FIG. 18, 800 to 818 indicate processes, respectively. In the process 800 in FIG. 18, the mobile node 10 in the home network 20 sends a packet to the router 14 in order to send data to the correspondent node 11. A destination address of the packet is a global address B while its sender address is a private address A. The router 14 receives the packet and send it to the correspondent node 11 (process 801). The correspondent node 11 sends the packet whose destination address is a global address A which is a sender address of the received packet as a response to the packet from the router 14 (process 802). The packet is received by the router 14 (process 802) and then is sent from the router 14 to the correspondent node 11 (process 803). In this way, communication is performed between the mobile node 10 in the home network 20 and the correspondent node 11 on the IP network.